

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-19 (canceled).

20. (new) A pressure electrolyzer, comprising an electrolytic cell block that contains a number of electrolytic cells combined to form a stack, each electrolytic cell having an anode and a cathode, and the electrolytic cell block having a sealed housing formed by a number of stacked cell frames of the electrolytic cells, the cell frames being composed at least partially of a material that is elastic at least in a longitudinal direction of the electrolytic cell block and seals adjacent cell frames from each other, end plates being provided so as to hold the electrolytic cell block in place between the end plates under compression of the elastic material, each of the cell frames having a rigid element that runs in a circumferential direction of the frame so as to mechanically stabilize the cell frame, the rigid element being connected with the elastic material, the rigid element forming a shell-like frame structure, which partially encloses the elastic material so that the elastic material partially protrudes from the rigid element to form a compressible region in the longitudinal direction of the electrolytic cell block, adjacent cell frames each having projecting parts and recesses that fit into each other for locking the adjacent cell frames in place and/or for sealing the adjacent cell frames.

21. (new) A pressure electrolyzer, comprising an electrolytic cell block that contains a number of electrolytic cells combined to form a stack, each electrolytic cell having an anode and a cathode, the electrolytic cell block having a sealed housing formed by a number of stacked cell frames of the electrolytic cells, the cell frames being composed at least partially of a material that is elastic at least in a longitudinal direction of the electrolytic cell block and seals adjacent cell frames from each other, end plates being provided so as to hold the electrolytic cell block in place between the end plates under compression of the elastic material, each of the cell frames having a rigid element that runs in a circumferential direction of the frame so as to mechanically stabilize the cell frames, the rigid element being connected with the elastic material, the rigid

element forming a frame-like insert that is at least partially embedded in the elastic material, adjacent cell frames each having projecting parts and recesses that fit into each other for locking the adjacent cell frames in place and/or for sealing the adjacent cell frames.

22. (new) The pressure electrolyzer in accordance with claim 21, wherein the rigid element is completely embedded in the elastic material.

23. (new) The pressure electrolyzer in accordance with claim 20, wherein each anode has its own anode cell frame, and each cathode has its own cathode cell frame.

24. (new) The pressure electrolyzer in accordance with claim 21, wherein each anode has its own anode cell frame, and each cathode has its own cathode cell frame.

25. (new) The pressure electrolyzer in accordance with claim 20, wherein the elastic material is an elastomer or a soft elastic thermoplastic.

26. (new) The pressure electrolyzer in accordance with claim 21, wherein the elastic material is an elastomer or a soft elastic thermoplastic.

27. (new) The pressure electrolyzer in accordance with claim 20, wherein the rigid element is made of a dimensionally stable material.

28. (new) The pressure electrolyzer in accordance with claim 27, wherein the rigid element is made of metal or plastic.

29. (new) The pressure electrolyzer in accordance with claim 20, wherein the rigid element is made of a dimensionally stable material.

30. (new) The pressure electrolyzer in accordance with claim 29, wherein the rigid element is made of metal or plastic.

31. (new) The pressure electrolyzer in accordance with claim 20, wherein the rigid element that forms the shell-like frame structure is made of an electrically insulating material.

32. (new) The pressure electrolyzer in accordance with claim 31, wherein the rigid element is made of plastic.

33. (new) The pressure electrolyzer in accordance with claim 20, wherein the end plates are configured to form a power supply to ends of the electrolytic cell block (3).

34. (new) The pressure electrolyzer in accordance with claim 21, wherein the end plates are configured to form a power supply to ends of the electrolytic cell block (3).